SEQUENCE LISTING

<110> Her Majesty the Queen in Right of Canada as Represented by the Minister of Health

<120> Anti-SARS Monoclonal Antibodies

<130> 85084-803

<150> US60/526971
<151> 2003-12-05

<150> US60/568225
<151> 2004-05-06

<160> 45

<170> PatentIn version 3.3

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<400> 1

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Ser Val Lys Ile Ser Cys Lys Thr Ser Gly Tyr Thr Phe Thr Glu Tyr
            20                  25                  30

Thr Met His Trp Val Lys Gln Ser His Gly Lys Asn Leu Glu Trp Ile
        35                  40                  45

Gly Gly Ile Asn Pro Asn Asn Gly Gly Thr Thr Tyr Asn Gln Lys Phe
    50                  55                  60

Lys Gly Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Asn Thr Ala Tyr
65                  70                  75                  80

Met Glu Leu Arg Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys
                85                  90                  95

Ser Arg Gly Asp Tyr Gly Thr Ser Tyr Gly Tyr Phe Asp Val Trp Gly
            100                 105                 110

Ala Gly Thr Thr Val Thr Val Ser Ser Ala Lys Thr Thr Ala Pro Ser
        115                 120                 125

Val Tyr Pro Leu Ala
    130
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<210> 2

<211> 128
<212> PRT
<213> Mus musculus

<400> 2

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Val Glu Leu Leu Glu Ser Gly Thr Val Leu Ala Arg Pro Gly Ala Ser
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Val Lys Met Ser Cys Glu Ala Ser Gly Tyr Thr Phe Thr Thr Tyr Trp
            20                  25                  30

Met His Trp Ile Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile Gly
        35                  40                  45

Ala Ile Tyr Pro Gly Asn Ser Asp Thr Thr Tyr Asn Gln Lys Phe Lys
    50                  55                  60

Gly Lys Ala Lys Leu Thr Ala Val Thr Ser Thr Ser Thr Ala Tyr Met
65                  70                  75                  80

Glu Leu Ser Ser Leu Thr Asn Glu Asp Ser Ala Val Tyr Tyr Cys Thr
                85                  90                  95

Arg Glu Gly Ile Pro Gln Leu Leu Arg Thr Met Asp Tyr Trp Gly Gln
            100                 105                 110

Gly Thr Ser Val Thr Val Ser Ser Ala Lys Thr Thr Pro Pro Ser Val
        115                 120                 125
```

<210> 3
<211> 127
<212> PRT
<213> Mus musculus

<400> 3

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Val Gln Leu Leu Glu Ser Gly Thr Val Leu Ala Arg Pro Gly Ala Ser
1               5                  10                  15

Val Lys Met Ser Cys Lys Ala Ser Gly Tyr Ser Phe Thr Ser Tyr Trp
            20                  25                  30

Met His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile Gly
        35                  40                  45

Ala Ile Tyr Pro Gly Asn Ser Asp Thr Ser Tyr Asn Gln Lys Phe Lys
    50                  55                  60

Gly Lys Ala Lys Leu Thr Ala Val Thr Ser Ala Ser Thr Ala Tyr Met
65                  70                  75                  80
```

```
Glu Leu Ser Ser Leu Thr Asn Glu Asp Ser Ala Val Tyr Tyr Cys Thr
                85                  90                  95

Arg Ser Val Tyr Tyr Gly Tyr Gly Tyr Phe Asp Val Trp Gly Ala Gly
            100                 105                 110

Thr Thr Val Thr Val Ser Ser Ala Lys Thr Thr Pro Pro Ser Val
        115                 120                 125
```

<210> 4
<211> 226
<212> PRT
<213> Mus musculus

<400> 4

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Glu Val Gln Leu Glu Glu Ser Gly Thr Val Leu Ala Arg Pro Gly Ala
1               5                   10                  15

Ser Val Lys Met Ser Cys Lys Ala Ser Gly Tyr Ser Phe Thr Ser Tyr
            20                  25                  30

Trp Met His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Asp Trp Ile
        35                  40                  45

Gly Ala Ile Tyr Pro Glu Asn Ser Asp Thr Ser Tyr Asn Gln Lys Phe
    50                  55                  60

Lys Gly Lys Ala Lys Leu Thr Ala Val Thr Ser Ala Ser Thr Ala Tyr
65                  70                  75                  80

Met Glu His Ser Ser Leu Thr Asn Glu Asp Ser Ala Val Tyr Tyr Cys
                85                  90                  95

Thr Arg Ser Val Tyr Tyr Gly Tyr Gly Tyr Phe Asp Val Trp Gly Ala
            100                 105                 110

Gly Thr Thr Val Thr Val Ser Ser Ala Lys Thr Thr Ala Pro Ser Val
        115                 120                 125

Tyr Pro Leu Ala Pro Val Cys Gly Asp Thr Thr Gly Ser Ser Val Thr
    130                 135                 140

Leu Gly Cys Leu Val Lys Gly Tyr Phe Pro Glu Pro Val Thr Leu Thr
145                 150                 155                 160

Trp Asn Ser Gly Ser Leu Ser Ser Gly Val His Thr Phe Pro Ala Val
                165                 170                 175
```

```
Leu Gln Ser Asp Leu Tyr Thr Leu Ser Ser Ser Val Thr Val Thr Ser
            180                 185                 190

Ser Thr Trp Pro Ser Gln Ser Ile Thr Cys Asn Val Ala His Pro Ala
        195                 200                 205

Ser Ser Thr Lys Val Asp Lys Lys Ile Glu Pro Arg Val Pro Thr Ser
    210                 215                 220

Gln Asn
225
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<210> 5
<211> 131
<212> PRT
<213> Mus musculus

<400> 5

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Leu Val Gln Leu Glu Glu Ser Gly Thr Val Leu Pro Arg Pro Gly Ala
1               5                   10                  15

Ser Val Lys Met Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
            20                  25                  30

Trp Met His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile
        35                  40                  45

Gly Ala Ile Tyr Pro Gly Asn Ser Asp Thr Asn Tyr Asn Gln Lys Phe
    50                  55                  60

Lys Gly Arg Ala Thr Leu Thr Ala Val Thr Ser Thr Ser Thr Ala Ser
65                  70                  75                  80

Met Glu Leu Ser Ser Leu Thr Asn Glu Asp Ser Ala Val Tyr Tyr Cys
                85                  90                  95

Thr Arg Asp Gly Tyr Gly Ser Leu Tyr Tyr Tyr Ala Met Asp Phe Trp
            100                 105                 110

Gly Gln Gly Thr Ser Val Thr Val Ser Ser Ala Lys Thr Thr Ala Pro
        115                 120                 125

Ser Val Lys
    130
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<210> 6
<211> 133

<212> PRT
<213> Mus musculus

<400> 6

```
Glu Val Gln Leu Glu Glu Ser Gly Thr Val Leu Ala Arg Pro Gly Ala
1               5                  10                  15

Ser Val Lys Met Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Thr Tyr
            20                  25                  30

Arg Met His Trp Ile Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile
        35                  40                  45

Gly Ala Ile Tyr Pro Gly Asn Ser Asp Thr Thr Tyr Asn Gln Lys Phe
    50                  55                  60

Lys Asp Lys Ala Lys Leu Thr Ala Val Thr Ser Thr Ser Ser Ala Tyr
65                  70                  75                  80

Met Glu Leu Ser Ser Leu Thr Asn Glu Asp Ser Ala Val Tyr Phe Cys
                85                  90                  95

Thr Arg Glu Gly Ile Pro Gln Leu Leu Arg Thr Leu Asp Tyr Trp Gly
            100                 105                 110

Gln Gly Thr Ser Val Thr Val Ser Ser Ala Lys Thr Thr Ala Pro Ser
        115                 120                 125

Val Tyr Pro Leu Ala
    130
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<210> 7
<211> 130
<212> PRT
<213> Mus musculus

<400> 7

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Glu Val Gln Leu Glu Glu Ser Gly Pro Gly Leu Val Ala Pro Ser Gln
1               5                  10                  15

Ser Leu Ser Ile Thr Cys Thr Val Ser Gly Phe Ser Leu Thr Asn Tyr
            20                  25                  30

Asp Ile Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Leu
        35                  40                  45

Gly Ile Ile Trp Thr Gly Gly Gly Thr Ser Tyr Asn Ser Ala Phe Met
    50                  55                  60
```

```
Ser Arg Leu Ser Ile Ser Lys Asp Asn Ser Lys Ser Gln Val Phe Leu
65                  70                  75                  80

Lys Met Asn Ser Leu Gln Thr Asp Asp Thr Ala Ile Tyr Tyr Cys Val
                85                  90                  95

Arg Asp Arg Val Tyr Tyr Phe Pro Met Asp Tyr Trp Gly Gln Gly Thr
            100                 105                 110

Ser Val Thr Val Ser Ser Ala Lys Thr Thr Ala Pro Ser Val Tyr Pro
        115                 120                 125

Leu Ala
    130
```

<210> 8
<211> 139
<212> PRT
<213> Mus musculus

<400> 8

```
Met Glu Trp Ser Trp Val Phe Leu Phe Leu Val Ala Thr Ala Thr Asp
1               5                   10                  15

Val His Ser Gln Val Gln Leu Gln Gln Pro Gly Ala Glu Leu Val Lys
            20                  25                  30

Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe
        35                  40                  45

Thr Asn Tyr Trp Ile His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu
    50                  55                  60

Glu Trp Ile Gly Glu Ile Asn Pro Gly Asn Gly Arg Thr Asn Tyr Asn
65                  70                  75                  80

Gly Asn Phe Met Asn Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Asn
                85                  90                  95

Thr Ala Tyr Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val
            100                 105                 110

Tyr His Cys Ala Arg Leu Asp Tyr Trp Gly Gln Gly Thr Thr Leu Thr
        115                 120                 125

Val Ser Ser Ala Lys Thr Thr Pro Pro Ser Val
    130                 135
```

<210> 9
<211> 123
<212> PRT
<213> Mus musculus

<400> 9

```
Val Gln Leu Leu Glu Ser Gly Ala Glu Leu Val Lys Pro Gly Ala Ser
1               5                   10                  15

Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr Trp
            20                  25                  30

Ile His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile Gly
        35                  40                  45

Glu Ile Asn Pro Ser Asn Gly Arg Thr Asn Tyr Asn Gly Asn Phe Glu
    50                  55                  60

Ser Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Asn Thr Ala Tyr Met
65                  70                  75                  80

His Leu Ser Ser Leu Thr Tyr Glu Asp Ser Ala Val Tyr His Cys Thr
                85                  90                  95

Arg Leu Asp Tyr Trp Gly Gln Gly Thr Thr Leu Thr Val Ser Ser Ala
            100                 105                 110

Lys Thr Thr Ala Pro Ser Val Tyr Pro Leu Ala
        115                 120
```

<210> 10
<211> 120
<212> PRT
<213> Mus musculus

<400> 10

```
Asp Ile Leu Met Thr Gln Ser Pro Thr Ser Phe Ala Val Ser Leu Gly
1               5                   10                  15

Gln Arg Ala Thr Ile Ser Cys Arg Thr Ser Gln Ser Val Ser Thr Ser
            20                  25                  30

Ser Tyr Ser Tyr Met His Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
        35                  40                  45

Lys Leu Leu Ile Lys Tyr Ala Ser Asn Leu Glu Ser Gly Val Pro Ala
    50                  55                  60
```

```
Arg Phe Ser Gly Ser Gly Ser Gly Ser Asp Phe Thr Leu Asn Ile His
65                  70                  75                  80

Pro Val Glu Glu Gly Asp Thr Ala Thr Tyr Tyr Cys Gln His Ser Trp
                85                  90                  95

Glu Ile Pro Cys Ala Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg
            100                 105                 110

Ala Asp Ala Ala Pro Thr Val Ser
        115                 120
```

<210> 11
<211> 116
<212> PRT
<213> Mus musculus

<400> 11

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Glu Leu Val Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Leu Gly
1               5                   10                  15

Glu Arg Val Ser Leu Thr Cys Arg Ala Ser Gln Glu Ile Ser Gly Tyr
            20                  25                  30

Leu Ser Trp Leu Gln Gln Lys Pro Asp Gly Thr Ile Lys Arg Leu Ile
        35                  40                  45

Tyr Ala Ala Ser Thr Leu Asp Ser Gly Val Pro Lys Arg Phe Ser Gly
    50                  55                  60

Ser Arg Ser Gly Ser Asp Tyr Ser Leu Thr Ile Ser Ser Leu Glu Ser
65                  70                  75                  80

Glu Asp Phe Ala Asp Tyr Tyr Cys Leu Gln Tyr Ile Ser Tyr Pro Trp
                85                  90                  95

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg Ala Asp Ala Ala
            100                 105                 110

Pro Thr Val Ser
        115
```

<210> 12
<211> 116
<212> PRT
<213> Mus musculus

<400> 12

```
Asp Ile Leu Met Thr Gln Ser His Lys Cys Met Ser Thr Ser Val Gly
```

1 5 10 15

Asp Arg Val Ser Ile Thr Cys Lys Ala Ser Gln Asp Val Ser Thr Ala
20 25 30

Val Val Trp Tyr Gln Gln Lys Pro Gly Gln Phe Pro Lys Leu Leu Ile
35 40 45

Tyr Trp Ala Ser Thr Arg His Thr Gly Val Pro Asp Arg Phe Thr Gly
50 55 60

Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Val Gln Ala
65 70 75 80

Glu Asp Leu Ala Leu Tyr Tyr Cys Gln Gln His Tyr Thr Thr Pro Tyr
85 90 95

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg Ala Asp Ala Ala
100 105 110

Pro Thr Val Ser
115

<210> 13
<211> 116
<212> PRT
<213> Mus musculus

<400> 13

Asp Ile Leu Met Thr Gln Ser His Lys Phe Met Ser Thr Ser Val Gly
1 5 10 15

Asp Arg Val Ser Ile Thr Cys Lys Ala Ser Gln Asp Val Ser Thr Ala
20 25 30

Val Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ser Pro Lys Leu Leu Ile
35 40 45

Tyr Trp Ala Ser Thr Arg His Thr Gly Val Pro Asp Arg Phe Thr Gly
50 55 60

Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Val Gln Ala
65 70 75 80

Glu Asp Leu Ala Leu Tyr Tyr Cys Gln Gln His Tyr Ser Thr Pro Tyr
85 90 95

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg Ala Asp Ala Ala

100 105 110

Pro Thr Val Ser
115

<210> 14
<211> 127
<212> PRT
<213> Mus musculus

<400> 14

Glu Leu Val Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Leu Gly
1 5 10 15

Asp Arg Val Thr Ile Ser Cys Arg Ala Ser Gln Asp Ile Ser Asn Tyr
20 25 30

Leu Asn Trp Tyr Gln Gln Lys Pro Asp Gly Thr Val Lys Leu Leu Ile
35 40 45

Tyr Tyr Thr Ser Arg Leu His Ala Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Tyr Ser Leu Thr Ile Ser Asn Leu Glu Gln
65 70 75 80

Glu Asp Ile Ala Thr Tyr Phe Cys Gln Gln Gly Tyr Thr Leu Pro Tyr
85 90 95

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg Ala Asp Ala Ala
100 105 110

Pro Thr Val Ser Lys Gly Glu Phe Gln His Thr Gly Gly Arg Tyr
115 120 125

<210> 15
<211> 115
<212> PRT
<213> Mus musculus

<400> 15

Asp Ile Leu Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Leu Gly
1 5 10 15

Glu Arg Val Ser Leu Thr Cys Arg Ala Ser Gln Glu Ile Ser Gly Tyr
20 25 30

Leu Ser Trp Leu Gln Glu Lys Pro Asp Gly Thr Ile Lys Arg Leu Ile
35 40 45

```
Tyr Ala Ala Ser Thr Leu Asp Ser Gly Val Pro Lys Arg Phe Ser Gly
    50                  55                  60

Ser Arg Ser Gly Ser Asp Tyr Ser Leu Thr Ile Ser Ser Leu Glu Ser
65                  70                  75                  80

Glu Asp Phe Ala Asp Tyr Tyr Cys Leu Gln Tyr Val Ser Tyr Pro Trp
                85                  90                  95

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg Ala Asp Ala Ala
            100                 105                 110

Pro Thr Val
        115
```

<210> 16
<211> 110
<212> PRT
<213> Mus musculus

<400> 16

```
Glu Leu Val Met Thr Gln Ser Pro Val Ser Ile Thr Ala Ser Arg Gly
1               5                   10                  15

Glu Lys Val Thr Ile Thr Cys Arg Ala Ser Ser Ser Ile Ser Ser Asn
            20                  25                  30

Tyr Leu His Trp Tyr Gln Gln Lys Pro Gly Ser Ser Pro Lys Leu Leu
        35                  40                  45

Ile Tyr Arg Thr Ser Ile Leu Ala Ser Gly Val Leu Asp Thr Phe Ser
    50                  55                  60

Gly Ser Gly Ser Glu Ser Ser Tyr Thr Leu Thr Ile Ser Cys Met Gln
65                  70                  75                  80

Asp Glu Val Ala Ala Thr Tyr Tyr Cys Gln Gln Gly Ser Ser Ser Pro
                85                  90                  95

Pro His Val Arg Arg Gly Asp Gln Ala Gly Asn Lys Thr Gly
            100                 105                 110
```

<210> 17
<211> 116
<212> PRT
<213> Mus musculus

<400> 17

```
Glu Leu Val Met Thr Gln Ser Pro Ala Ser Leu Ser Val Ala Thr Gly
1               5                  10                  15

Lys Lys Val Thr Ile Arg Cys Ile Ser Ser Thr Asp Ile Asp Asp Asp
            20                  25                  30

Met Asn Trp Tyr Gln Gln Lys Ala Gly Lys Pro Pro Lys Leu Leu Ile
        35                  40                  45

Ser Glu Gly Asn Ile Phe Ser Pro Gly Val Pro Ser Arg Phe Ser Ser
    50                  55                  60

Ser Gly Asn Gly Thr Asp Phe Val Phe Thr Val Glu Asn Thr Leu Ser
65                  70                  75                  80

Glu Asp Val Ala Asp Asn Tyr Cys Leu Gln Ser Asp Asn Met Pro Phe
                85                  90                  95

Thr Phe Gly Ser Gly Thr Lys Leu Gly Ile Lys Arg Ala Asp Ala Ala
            100                 105                 110

Pro Thr Val Ser
        115
```

<210> 18
<211> 116
<212> PRT
<213> Mus musculus

<400> 18

```
Glu Leu Val Met Thr Gln Ser Pro Ala Ser Leu Ser Val Ile Thr Gly
1               5                  10                  15

Lys Lys Val Thr Ile Arg Cys Ile Ser Asn Thr Asp Ile Asp Asp Asp
            20                  25                  30

Leu Asn Trp Ser Gln Leu Lys Ala Gly Glu Pro Pro Lys Leu Leu Ile
        35                  40                  45

Ser Glu Gly Asn Ile Phe Ser Pro Gly Val Pro Ser Arg Phe Ser Ser
    50                  55                  60

Ser Gly Asn Gly Thr Asp Phe Val Phe Thr Ile Glu Asn Thr Leu Ser
65                  70                  75                  80

Glu Asp Val Ala Asn Asn Tyr Cys Phe Gln Ser Asp Asn Met Pro Phe
                85                  90                  95
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Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys Arg Ala Asp Ala Ala
100 105 110

Pro Thr Val Ser
115

<210> 19
<211> 457
<212> DNA
<213> Mus musculus

<400> 19
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gtccggctgc aacagtctgg acctgaactg gtgaagcctg gggcttcagt gaagatatcc 120

tgcaagactt ctggatacac attcactgaa tacaccatgc actgggtgaa gcagagccat 180

ggaaagaacc ttgagtggat tggaggtatt aatcctaata atggtggtac tacctacaac 240

cagaagttta agggcaaggc cacattgact gtagacaagt cctccaacac agcctacatg 300

gagctccgca gcctgacatc tgaggattct gcagtctatt attgttcaag aggggactac 360

ggtactagct acgggtactt cgatgtctgg ggcgcaggga ccacggtcac cgtctcctca 420

gccaaaacaa cagccccatc ggtctatcca ctggcca 457

<210> 20
<211> 385
<212> DNA
<213> Mus musculus

<400> 20
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ggacagggtc tggaatggat tggcgctatt tatccaggaa atagtgatac tacctacaac 180

cagaagttca agggcaaggc caaactgact gcagtcacat ccaccagcac tgcctacatg 240

gagctcagca gcctgacaaa tgaggactct gcggtctatt actgtacaag agagggaatt 300

ccccaattac ttcggactat ggactactgg ggtcaaggga cctcagtcac cgtctcctca 360

gccaaaacaa cacccccatc ggtca 385

<210> 21
<211> 381
<212> DNA
<213> Mus musculus

<400> 21
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tgcaaggctt ctggctacag ctttaccagc tactggatgc actgggtaaa acagaggcct 120

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cagaagttca agggcaaggc caaactgact gcagtcacat ccgccagtac tgcctacatg 240

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aaaacaacac ccccatcggt c 381

<210> 22
<211> 678
<212> DNA
<213> Mus musculus

<400> 22
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tcctgcaagg cttctggcta cagctttacc agctactgga tgcactgggt aaaacagagg 120

cctggacagg gtctagattg gattggtgct atttatcctg aaaatagtga tactagctac 180

aaccagaagt tcaagggcaa ggccaaactg actgcagtca catccgccag cactgcctac 240

atggagcaca gcagcctgac aaatgaggac tctgcggtct attactgtac aagatccgtt 300

tactacggct acgggtactt cgatgtctgg ggcgcaggga ccacggtcac cgtctcctca 360

gccaagacaa cagccccatc ggtctatcca ctggcccctg tgtgtggaga tacaactggc 420

tcctcggtga ctctaggatg cctggtcaag ggttatttcc ctgagccagt gaccttgacc 480

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acctgcaatg tggcccaccc ggcaagcagc accaaggtgg acaagaaaat tgagcccaga 660

gtgcccacta gtcagaac 678

<210> 23
<211> 398
<212> DNA
<213> Mus musculus

<400> 23
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tcctgcaagg cttctggcta cacctttacc agctactgga tgcactgggt aaaacagagg 120

cctggacagg gtctggaatg gattggcgct atttatcctg gaaatagtga tactaactac 180

aaccagaagt tcaagggcag ggccacactg actgcagtca catccaccag cactgcctcc 240

atggagctca gcagcctgac aaatgaggac tctgcggtct attactgtac aagagacggc 300

tatggtagcc tttattacta tgctatggac ttctggggtc aaggaacctc agtcaccgtc 360

tcctcagcca aaacaacagc cccatcggtc aagggcga 398

<210> 24
<211> 399
<212> DNA
<213> Mus musculus

<400> 24
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tcctgcaagg cttctggcta cacctttacc acctaccgga tgcactggat aaaacagagg 120

cctggacagg gtctggaatg gattggcgct atttatcctg gaaatagtga tactacctac 180

aaccagaagt tcaaggacaa ggccaaactg actgcagtca catccaccag ctctgcctac 240

atggagctca gcagcctgac aaatgaggac tctgcggtct atttctgtac aagagaggga 300

attccccaat tacttcggac tttggactac tggggtcaag gaacctcagt caccgtctcc 360

tcagccaaaa caacagcccc atcggtctat ccactggcc 399

<210> 25
<211> 392
<212> DNA
<213> Mus musculus

<400> 25
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accaggaaag ggtctggagt ggcttggaat aatatggact ggtggaggca caagttataa 180

ttcagctttc atgtccagac tgagcatcag caaggacaac tccaagagcc aagttttctt 240

aaaaatgaac agtctgcaaa ctgatgacac agccatatat tactgtgtaa gagatagggt 300

ctactacttc cctatggact actggggtca aggaacctca gtcaccgtct cctcagccaa 360

aacaacagcc ccatcggtct atccactggc ca 392

<210> 26
<211> 417
<212> DNA
<213> Mus musculus

<400> 26
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gtccaactgc agcagcctgg ggctgaactg gtgaagcctg gggcttcagt gaaagtgtcc 120

tgcaaggctt ctggctacac cttcaccaac tactggatac actgggtgaa gcagaggcct 180

ggacagggcc ttgagtggat tggagagatt aatcctggca acggtcgtac taactataat 240

gggaacttca tgaacaaggc cacactgact gtagacaaat cctccaacac agcctacatg 300

caactcagca gcctgacatc tgaggactct gcggtctatc actgtgcaag attagactac 360

tggggccaag gcaccactct cacagtctcc tcagccaaaa caacaccccc atcggtc 417

<210> 27
<211> 369
<212> DNA
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<400> 27
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tgcaaggctt ctggctacac cttcaccagc tactggatac actgggtgaa gcagaggcct 120

ggacagggcc ttgagtggat tggagagatt aatcctagca acggtcgtac taactataat 180

gggaacttcg agagcaaggc cacactgact gtagacaaat cctccaacac agcctacatg 240

cacctcagca gcctgacata tgaggactct gcggtctatc actgtacaag attagactac 300

tggggccaag gcaccactct cacagtctcc tcagccaaaa caacagcccc atcggtctat 360

ccactggcc 369

<210> 28
<211> 380
<212> DNA
<213> Mus musculus

<400> 28
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ctctggggca gagggccacc atctcatgca ggaccagcca aagtgtcagt acatctagct 120

atagttatat gcactggtac caacagaaac caggacagcc acccaaactc ctcatcaagt 180

atgcatccaa cctagaatct ggggtccctg ccaggttcag tggcagtggg tctgggtcag 240

acttcaccct caacatccat cctgtggagg aggggatac tgcaacatat tactgtcagc 300

acagttggga gattccgtgc gcgttcggag gggggaccaa gctggaaata aaacgggctg 360

atgctgcacc aactgtatcc 380

<210> 29
<211> 359
<212> DNA
<213> Mus musculus

<400> 29
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aaagagtcag tctcacttgt cgggcaagtc aggaaattag tggttattta agctggcttc 120

agcagaaacc agatggaact attaaacgcc tgatctacgc cgcatccact ttagattcgg 180

gtgtcccaaa aaggttcagt ggcagtaggt ctgggtcaga ttattctctc accatcagca 240

gccttgagtc tgaagatttt gcagactatt actgtctaca atatattagt tatccgtgga 300

cgttcggggg aggtaccaag ctggaaatca aacgggctga tgctgcacca actgtatcc 359

<210> 30
<211> 348

<212> DNA
<213> Mus musculus

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gggcaatttc ctaaactact gatttactgg gcatccaccc ggcacactgg agtccctgat 180

cgcttcacag gcagtggatc tgggacagat tatactctca ccatcagcag tgtgcaggct 240

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gggaccaagc tggaaataaa acgggctgat gctgcaccaa ctgtatcc 348

<210> 31
<211> 368
<212> DNA
<213> Mus musculus

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cctggtatca acaaaaacca gggcaatctc ctaaactact gatttactgg gcatccaccc 180

ggcacactgg agtccctgat cgcttcacag gcagtggatc tgggacagat tatactctca 240

ccatcagcag tgtgcaggct gaagacctgg cactttatta ctgtcagcaa cattatagca 300

ctccgtacac gttcggaggg gggaccaagc tggaaataaa acgggctgat gctgcaccaa 360

ctgtatcc 368

<210> 32
<211> 350
<212> DNA
<213> Mus musculus

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gatggaactg ttaaactcct gatctattac acatcaagat tacacgcagg agtcccatca 180

aggttcagtg gcagtgggtc tggaacagat tattctctca ccattagcaa cctggagcaa 240

gaagatattg ccacttactt ttgccaacag ggttatacgc ttccgtacac gttcggaggg 300

gggaccaagc tggaaataaa acgggctgat gctgcaccaa ctgtatccaa 350

<210> 33
<211> 345
<212> DNA
<213> Mus musculus

<400> 33

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ctcacttgtc gggcaagtca ggaaattagt ggttacttaa gctggcttca ggagaaacca 120

gatggaacta ttaaacgcct gatctacgcc gcttccactt tagattctgg tgtcccaaaa 180

aggttcagtg gcagtaggtc tgggtcagat tattctctca ccatcagcag ccttgagtct 240

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ggcaccaagc tggaaatcaa acgggctgat gctgcaccaa ctgta 345

<210> 34
<211> 364
<212> DNA
<213> Mus musculus

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accagcagaa gccaggatcc tcccctaaac ttttgattta taggacatcc atcctggcat 180

ctggagtcct ggacaccttc agtggcagtg ggtctgagag ctcttacact ctgacaatca 240

gctgcatgca ggacgaagtt gctgccactt actattgtca gcaggggagt agtagcccac 300

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tcca 364

<210> 35
<211> 359
<212> DNA
<213> Mus musculus

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agcagaaggc aggaaaacct cctaaactcc ttatttcaga aggcaatatt tttagtcctg 180

gagtcccatc ccgattctcc agcagtggca atggcacaga ttttgttttt acagttgaaa 240

acacgctctc agaagatgtt gcagataact actgtttgca aagtgataac atgccattca 300

cgttcggctc ggggacaaag ttgggaataa aacgggctga tgctgcacca actgtatcc 359

<210> 36
<211> 359
<212> DNA
<213> Mus musculus

<400> 36
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agctgaaggc aggagaacct cctaaactcc ttatttcaga aggcaatatt tttagtcctg 180

gagtcccatc ccgattctcc agcagtggca atggcacaga ttttgttttt acaattgaaa 240

acacgctctc agaagatgtt gcaaataact actgtttcca aagtgataac atgccattca 300

cgttcggctc ggggacaaag ttggaaataa aacgggctga tgctgcacca actgtatcc 359

<210> 37
<211> 19
<212> DNA
<213> Artificial

<220>
<223> forward rt-pcr primer for polymerase gene

<400> 37
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<210> 38
<211> 20
<212> DNA
<213> Artificial

<220>
<223> reverse primer for RT-PCR of polymerase gene

<400> 38
aatgtttacg caggtaagcg 20

<210> 39
<211> 18
<212> DNA
<213> Artificial

<220>
<223> forward primer for nested PCR of polymerase gene

<400> 39
tgttaaacca ggtggaac 18

<210> 40
<211> 18
<212> DNA
<213> Artificial

<220>
<223> reverse primer for nested pcr of polymerase gene

<400> 40
cctgtgttgt agattgcg 18

<210> 41
<211> 21
<212> DNA
<213> Artificial

<220>

<223> forward primer for real-time pcr of nucleoprotein

<400> 41
accagaatgg aggacgcaat g 21

<210> 42
<211> 25
<212> DNA
<213> Artificial

<220>
<223> reverse primer for real-timer pcr of nucleoprotein

<400> 42
gctgtgaacc aagacgcagt attat 25

<210> 43
<211> 16
<212> DNA
<213> Artificial

<220>
<223> TaqMan MGB probe - has 5' 6-carboxyfluorescein reporter dye

<400> 43
accccaaggt ttaccc 16

<210> 44
<211> 116
<212> PRT
<213> Mus musculus

<400> 44

Glu Leu Val Met Thr Gln Ser Pro Ala Ser Leu Ser Ala Ser Val Gly
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Glu Thr Val Thr Ile Thr Cys Arg Ala Ser Gly Asn Ile His Asn Tyr
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Gln Gly Lys Ser Pro Gln Leu Leu Val
35 40 45

Tyr Asn Ala Lys Thr Leu Ala Asp Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Gln Tyr Ser Leu Lys Ile Asn Ser Leu Gln Ser
65 70 75 80

Glu Asp Phe Gly Ser Tyr Tyr Cys Gln His Phe Trp Ser Ile Pro Tyr
85 90 95

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg Ala Asp Ala Ala
100 105 110

Pro Thr Val Ser
115

<210> 45
<211> 129
<212> PRT
<213> Mus musculus

<400> 45

Glu Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Val
1 5 10 15

Ser Met Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ser Phe Thr Gly Tyr
20 25 30

Thr Met Asn Trp Val Lys Gln Ser His Gly Lys Asn Leu Glu Trp Ile
35 40 45

Gly Leu Ile Asn Pro Tyr Asn Gly Gly Thr Asn Tyr Asn Gln Lys Phe
50 55 60

Lys Gly Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Leu Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Ser Tyr Tyr Gly Ser Ser Pro Tyr Tyr Ala Met Asp Tyr Trp
100 105 110

Gly Gln Gly Thr Ser Val Thr Val Ser Ser Ala Lys Thr Thr Ala Pro
115 120 125

Ser